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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,474	02/27/2004	Kenneth Avicola		8555
7590 JOHN R. ROSS PO Box 2138 DEL MAR, CA 92014		03/22/2007	EXAMINER MALLARI, PATRICIA C	
			ART UNIT	PAPER NUMBER 3735
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/22/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/789,474	AVICOLA ET AL.
	Examiner Patricia C. Mallari	Art Unit 3735

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12/26/06.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3 and 9-16 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,3 and 9-16 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 29 October 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

This is a final Office action. Any new grounds of rejection were necessitated by the applicants' amendments to the claims.

### ***Drawings***

The replacement or new drawings were received on 10/29/04 and 4/11/06. These drawings are not accepted. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

### ***Claim Objections***

Claim 1 is objected to because of the following informalities:

On line 2 of part I of claim 1, "two" should be replaced with "three". Appropriate correction is required.

Claim 9 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 3. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claim 9 recites that the three visible light emitters are red, blue, and green emitters, wherein claim 3 recites the same. Claim 9 additionally recites a "means to determine heart rates". However, claim 1, upon which claim 9 depends recites "a pulse rate calculation means for calculating the wearer's

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pulse rate". The applicants' specification fails to differentiate between a means to determine heart rates and a pulse rate calculation means. Therefore, the means to determine heart rates is taken to be the same as the pulse rate calculation means, and claim 9 is deemed a substantial duplicate of claim 3.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 16 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 16 recites, "a battery unit positioned on the inside of an earlobe and connected through an earlobe". The earlobe is a body portion and therefore is considered non-statutory subject matter which cannot positively be claimed. The applicants may overcome this rejection by replacing the recited language with "a battery unit adapted to be positioned on the inside of an earlobe and adapted to be connected through an earlobe".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,647,217 to Havel in view of US Patent No. 4,653,498 to New, Jr. et al. and further in view of US Patent No. 6,572,636 to Hagen et al.

Havel teaches an earring (see entire document, especially col. 23, lines 4-14 of Havel) comprising a pulse rate sensor an electrical circuit for analyzing signals from the detector to detect each beat of a wearer's heart and for calculating the wearer's pulse rate (see entire document, especially col. 2, line 3-col. 22, line 9 of Havel). At least three visible light emitters are included (see entire document, especially figs. 8, 63, and 65; col. 5, lines 50-55; col. 22, line 24-col. 23, line 3 of Havel). A first trigger circuit initiates electrical pulses to cause one of the visible light emitters to display a first color (turn on a first emitter) for heart rates below a first predetermined rate. A second trigger circuit initiates a second emitter to illuminate when the pulse rate exceeds the first predetermined rate. A third trigger circuit initiates the third emitter to illuminate when the pulse rate exceeds a second predetermined rate (see entire document, especially figs. 8, 62-64; col. 22, line 24-col. 24, line 3 of Havel). The pulse rate detector of Havel utilizes EEG electrode (see entire document, especially col. 21, lines 39-54 of Havel) rather than an infrared emitter and detector, and Havel lacks the emitters flashing once for every heartbeat.

However, New, Jr. teaches a device that detects and indicates the pulse rate of a wearer, wherein the pulse rate detector comprises an infrared emitter 30 positioned to emit infrared light into the tissue of a wearer and an infrared detector 38 positioned to detect infrared light emanating form said tissue (see entire document, especially fig. 2;

col. 5, lines 46-61 of New, Jr.) Although the reference is silent as to a power source, the device must inherently include a power source in order for the emitter and detector to be able to emit the light and detect the light, as described. An electrical circuit is provided for analyzing electrical signals from the detector to detect each beat of a wearer's heart and a pulse rate calculation means calculates the wearer's pulse rate (see entire document, especially col. 8, line 41-col. 10, line 2; col. 11, lines 1-16 of New, Jr.) Therefore, it would have been obvious to one of ordinary skill in the art to use the pulse rate detector of New, Jr. in place of that of Havel, as it would merely be the substitution of one known pulse detector for another. Havel, as modified, still lacks the emitter flashing once per heartbeat.

However, Hagen teaches flashing jewelry for indicating a pulse rate of a wearer, the jewelry comprising at least three visible light emitters that flash once for every heartbeat (see entire document, especially col. 6, lines 2-29 of Hagen). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for the emitters of Havel, as modified, to flash once per heartbeat as do the emitters of Hagen, in order to provide further indication of the wearer's pulse rate (see entire document, especially col. 6, lines 18-29; col. 8, lines 50-56 of Hagen), wherein such indication would clearly allow more accurate diagnosis and/or monitoring of the wearer.

Regarding claims 3 and 9, the at least three emitters emit, respectively, red, green, and blue light (see entire document, especially fig. 9; col. 5, lines 50-55; col. 7, lines 14-22 of Havel).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havel, in view of New, Jr. and Hagen, as applied to claims 1, 3, and 9 above. Havel, as modified, would result in any of the blue, red, or green emitters flashing with each heartbeat (see entirety of all three documents, especially figs. 63 and 65; col. 7, line 40-col. 10, line 22; col. 22, lines 38-col. 23, line 3 of Havel), the green emitter flashing with each heartbeat when the heart rate of the wearer exceeds a first threshold in excess of the wearer's rest heart rate, wherein the resting heart rate is typically between 60-80 bpm (see entirety of all three documents, especially fig. 65; col. 10, lines 4-22; col. 22, line 38-col. 23, line 3 of Havel), and the red emitter flashing with each heart beat when the heart rate is in excess of a second threshold in excess of the first (see entirety of all three documents, especially col. 8, line 57-col. 9, line 2; col. 22, line 38-col. 23, line 3 of Havel), rather than the blue emitter. However, the applicants have not disclosed that use of the particular colored light emitters in conjunction with the particular heart rate levels solves any stated problem or is for any particular purpose. Moreover, one of ordinary skill in the art would have expected the applicants' invention to work equally well with any combination of different visible colored light emitters or any alternate combination of color display corresponding to heart rate levels. Accordingly the use of a blue emitter is deemed to be mere design consideration which fails to patentably distinguish over the prior art of Hagen, as modified.

Regarding claim 11, the first threshold is at least 115% of the wearer's resting heart rate, wherein normal resting heart rate is typically between 60-80 bpm, and 79

bpm is at least 115% of 60 bpm. The second threshold is at least 130% of the wearer's resting heart rate, wherein 119 bpm is at least 130% of 60-80 bpm (see entire document, especially fig. 65 of Havel).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Havel, in view of New, Jr. and Hagen, as applied to claims 1, 3, and 9 above, and further in view of US Patent No. 6,277,079 to Avicola. Havel, as modified, is silent as to the type of electric circuit employed. However, Avicola teaches flashing jewelry for displaying a user's pulse rate employing an ASIC circuit (see entire document, especially col. 3, lines 55-61 of Avicola). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the circuit of Avicola in the flashing jewelry of Havel, as modified, since Havel, as modified, teaches jewelry using an electric circuit, and Avicola describes an appropriate type of electric circuit.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Havel, in view of New, Jr. and Hagen, as applied to claims 1, 3, and 9 above, and further in view of US Patent No. 5,490,523 to Isaacson et al. Havel, as modified, teaches an electrical circuit for sensing the pulse rate and driving LEDs but is silent as to the type of circuit used. However, Isaacson teaches a device for determining pulse rate wherein a surface mounted circuit is used to determine the pulse and drive the LEDs (see entire document, especially col. 3, line 60-col. 4, line 3 of Isaacson et al.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the

circuit of Isaacson as that of Havel, as modified, since Havel, as modified, teaches using an electric circuit, and Isaacson disclose an appropriate such circuit.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havel, in view of New, Jr. and Hagen, as applied to claims 1, 3, and 9 above, and further in view of New, Jr. Havel, as modified, lacks a transmitter for transmitting a signal to an audio device to initiate a sound when at least one threshold is exceeded. However, New, Jr. teaches a pulse rate detector and indicator comprising a transmitter to transit a signal to an audio device to initiate a sound when one of the predetermined rates is exceeded (see entire document, especially col. 11, line 63-col. 1, line 5 of New, Jr.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use combine the transmitter of New, Jr. with the jewelry of Havel, as modified, since the human ear is particularly sensitive to sound and in order to alert a physician or caretaker in the vicinity of the pulse rate (see entire document, especially col. 3, lines 13-18 of New, Jr.)

Regarding claim 15 the applicants should note that the audio device is not positively claimed in either of claims 14 and 15, such that the particulars of the audio device bear patentable weight only insofar as the transmitter being capable of transmitting a signal to such an audio device. Clearly the transmitter of Havel, as modified, is capable of transmitting a signal to such an audio device that initiates the sound of church bells.

***Response to Arguments***

The applicants neither addressed the rejection of claim 16 under 35 U.S.C. 101 nor overcame the rejection. The applicants are required to address or overcome the rejection in response to this Office action.

Applicant's arguments with respect to claims 1 and 6 have been considered but are moot in view of the new ground(s) of rejection. The applicants did state that none of the prior art suggested making earring that flash with each heartbeat. However, the examiner disagrees. See the above rejections for teaching of such earrings.

***Allowable Subject Matter***

Claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The allowability of claim 16 was addressed in a previous Office action filed 7/27/05.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

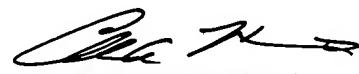
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (571) 272-4729. The examiner can normally be reached on Monday-Friday 10:00 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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CHARLES A. MARMOR II  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700